CLAIMS

What is claimed is:

1. An apparatus for conveying a partially-formed container blank through a turn in a path of formation comprising:

a. a platform having a continuous track around its perimeter;

b. at least one support structure movably engaged with said track for traveling thereon;

c. a rotatable arm pivotally attached to each support structure, each such arm supporting at least one variably operable vacuum attachment device for temporary engagement with a partially-formed container;

d. a continuous groove on said platform in the vicinity of said track; and

e. a movable linkage on said support structure, a first end of said linkage being pivotally attached to said arm, and an opposite end of said linkage being attached to a follower that fits into said groove wherein said linkage is capable of imparting rotation to said arm in response to the movement of said follower in said groove as said support structure travels along said track.

2. The apparatus of claim 1 wherein said variably operable vacuum device is a suction cup attached to a switchable vacuum source.

3. The apparatus of claim 1 wherein said vacuum attachment device temporarily engages a partially-formed container such that said container moves along a section of said track as said support structure travels thereon.

4. The apparatus of claim 3 wherein said linkage imparts rotation to said arm while said container is engaged to said vacuum attachment device.

5. The apparatus of claim 3 wherein said linkage imparts rotation to said arm for a portion of the time said container is engaged to said vacuum attachment device.

6. The apparatus of claim 1 wherein said rotatable arm is also slidably attached to said support structure allowing for reciprocating vertical movement, a second follower is attached to said arm, and a guide is provided along a section of said track for engagement with said second follower to raise and lower said arm as said support structure travels along said guide.

7. The apparatus of claim 6 wherein said second follower is in the form of a disc.

8. The apparatus of claim 6 wherein said guide is provided within the same section of said track where said vacuum suction means temporarily attaches to said container.

9. The apparatus of claim 1 wherein a motor is provided for driving said support structure around said track.

10. The apparatus of claim 9 wherein said motor is in communication with a continuous belt that drives at least one sprocket causing said support structure to travel around said track.

11. A method for changing the path of travel of a partially-formed container blank in a container forming machine comprising the steps of:

a. temporarily engaging said partially-formed container with at least one vacuum suction device, said suction device being attached to a support shaft, said shaft being attached to a support structure that travels along a continuous track;

b. moving said support structure such that said temporarily attached container travels along a section of said track;

c. disengaging said suction device from said container at the end of said section of track.

12. The method of claim 11 wherein said section of said track is curved.

13. The method of claim 11 wherein a groove is provided in the vicinity of said track, a moveable follower is provided in said groove, said support shaft is rotatable, and a movable linkage is provided between said follower and said support arm.

14. The method of claim 13 comprising the additional step of:

d. rotating said shaft in response to the movement of said follower in said groove as said support structure travels along said track.

15. The method of claim 14 wherein said rotatable shaft is also slidably attached to said support structure allowing for reciprocating vertical movement, a second follower is attached to the top of said shaft, and a guide is provided along a section of said track for engagement with said second follower.

16. The method of claim 15 comprising the additional step of:

e. raising and lowering said arm as said support structure travels along said guide.

17. The method of claim 16 wherein said guide is provided within the same section of said track where said vacuum suction means temporarily attaches to said container.

18. The method of claim 17 wherein said second follower comprises a disc.

19. A sub-assembly for a container forming machine that changes the path of formation of a partially-formed container blank as it travels through the machine comprising:

a. a platform means a continuous track around its perimeter;

b. at least one support means movably engaged with said track for traveling thereon;

c. a rotatable shaft means pivotally attached to each support means, each such shaft means supporting at least one variably operable vacuum attachment means for temporary engagement with a partially-formed container;

d. a continuous groove means on said platform means in the vicinity of said track; and

e. a movable linkage means on said support means, a first end of said linkage means being pivotally attached to said shaft means, and an opposite end of said linkage means being attached to a following means that fits into said groove means wherein said linkage means is capable of imparting rotation to said shaft means in response to the movement of said following means in said groove means as said support means travels along said track.

20. The sub-assembly of claim 19 wherein said rotatable shaft means is also slidably attached to said support means allowing for reciprocating vertical movement, a second following means is attached to said rotatable shaft means, and a means for guiding said second following means is provided along a section of said track to raise and lower said shaft means as said support means travels along said guiding means.